REMARKS

Applicant submits these remarks in response to the Office Action mailed June 26, 2008 ("Office Action"), and the telephonic interview conducted on December 12, 2008 ("the interview"), in connection with the above-identified application. The Office Action provided a three-month shortened statutory period in which to respond. Applicant has submitted herewith a petition for a three-month extension of time, thereby extending the deadline for a response to December 26, 2008. Accordingly, this Response is timely and, for the reasons outlined below, Applicant requests that the Office withdraw the rejection of pending claims 42-44 and allow them to proceed to issuance.

I. Summary of the Interview

Applicant appreciates the Examiner making herself available for a telephonic interview on December 12, 2008. During the interview, Applicant's representative and the Examiner discussed some of the novel aspects of the claimed invention as recited in pending claims 42-44 in view of the prior art, particularly U.S. Patent No. 5,798,068 to Vlug and EP 0 397 506 A2 ("EP '506"). For example, Applicant's representative pointed out the unique way in which the claimed invention uses a heating chamber and at least one sprayer nozzle with a plurality of orifices to spray molten polymer and thereby forcibly spread the metal-coated fibers without contact between the fibers and sprayer nozzle.

It was further discussed how Vlug and EP '506, the prior art references used to reject pending claims 42-44 as obvious, disclose using one or more horizontal slots to extrude polymer in a film that penetrates the fibers as they are pulled over a spreader or impregnation head. After reviewing the claim language and the disclosures of Vlug and EP '506, and as indicated in the Interview Summary, the Office indicated that the claimed invention was distinguished over those references. The Office further indicated that a further search and examination would be required before the claims could be allowed.

II. Rejections Under 35 U.S.C. § 103(a)

The Office rejected claims 42-44 under 35 U.S.C. § 103(a) as obvious over Vlug in view of EP '506. Applicant respectfully requests that the Office withdraw this rejection and permit the claims to proceed to issuance for at least the following reasons.

A determination of obviousness begins with four underlying factual inquiries: 1) determining the scope and content of the prior art, 2) ascertaining the differences between the prior art and the claimed invention, 3) resolving the level of skill in the pertinent art, and 4) considering secondary considerations such as commercial success, longfelt but unsolved needs, failure of other, etc. *Graham v. John Deere*, 383 U.S. 1 (1966).

Vlug discloses a process of making a fiber reinforced polymeric material by sliding a fiber bundle over an arcuate support surface and injecting into the bundle a polymer through a plurality of slots that are transverse to the fiber bundle. *See* Abstract. Vlug supplies polymer with an extruder through transverse slots in the arcuate support "to create a film of polymer under the fiber bundle to be impregnated, which extends over the entire contact area." Col. 3, lines 17-25. The extruded polymer is pressed through the slots in the arcuate surface to crate at in an amount sufficient to form a film on the arcuate support without pushing the fibers aside. Col. 2, lines 14-37.

EP '506 discloses a method for impregnating fiber bundles with resin by impregnating a continuous web of one or more fiber bundles with resin while subjecting the resin to shear forces by bringing it between two closely spaced surfaces that are in moving relationship to each other. As shown in Figure 2, resin (32) is extruded through a transverse slot (33) of an impregnation head. Fibers bundles travel past the slot and pull the resin between the surfaces of the fiber bundles and the surface of the impregnation head, thereby creating a shear force that lowers the viscosity of the resin and ensures maximum impregnation of the fiber bundles. *See* col. 5, lines 50-56.

In contrast, the invention of pending claims 42-44 is neither taught nor suggested by Vlug in view of EP '506 for several, independent reasons. First, claims 42-44 recite one or more spray nozzles with orifices configured to spray metal-coated fibers with a polymer. Second, the spray nozzles and orifices are configured in such a way that polymer can be ejected and sprayed to forcibly spread the fibers without contacting the fibers with the at least one sprayer nozzle. *See* claim 42.

Moreover, Vlug and EP '506 both recite sliding the fibers over an arcuate support or impregnation head. Those references both rely on having a contact area between the fibers and the arcuate support or impregnation head. Vlug, col. 3, lines 59-61 ("The polymer that exits

from channels tends to create a film of polymer over the contact area between the fiber bundle and the arcuate surface"); EP '506 ("the resin is pulled between the surfaces of the web and the surface of the impregnation head and thus made subject to shear forces"). On the other hand, the claimed invention explicitly claims spreading the fibers without making contact between the fibers and the at least one sprayer nozzle. For these additional, independent reasons, Vlug and EP '506, either alone or in combination, fail to anticipate or render obvious the invention recited in pending clams 42-44.

CONCLUSION

For at least the reasons set forth above, Applicant submits that pending claims 42-44 of this application are in condition for allowance. Accordingly, Applicant respectfully requests the favorable consideration and prompt allowance of those claims. Should the Office have any questions or comments that would facilitate further prosecution or allowance of this application, Applicant invites the Office to contact the Applicant's representative designated below at (202) 282-5704.

Respectfully submitted,

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Date:

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